

In the Claims:

Please amend claims 1, and 9-13 as follows:

1. (Currently Amended) An access management system managing access to a smart card by a plurality of applications, comprising:

an exclusion control unit allowing an application exclusive access to the smart card, in response to an exclusive access request for the smart card from the application, when the smart card has a logical channel not exclusively accessed by another application; and

an access control unit permitting the application allowed the exclusive access by the exclusion control unit to access the smart card, in response to an access request for the smart card from the application, when the application has already been authenticated for the smart card;

wherein said access control unit manages authentication between applications and the smart card using process IDs of the applications.

2. (Original) The system according to claim 1, wherein
said exclusion control unit queues an application which issues an exclusive access request in response to an exclusive access request for the smart card from the application when the smart card has no logical channel not exclusively accessed by another application.

3. (Original) The system according to claim 1, wherein
said access control unit rejects the access request from the application
allowed the exclusive access if the application has not been authenticated for the smart card.

4. (Cancelled)

5. (Original) The system according to claim 1, wherein
said access control unit changes an application authenticated for the
smart card into a non-authenticated application when the smart card is extracted from a smart
card reader.

6. (Original) The system according to claim 1, wherein
when said application accesses the smart card plural times, said
application issues the exclusive access request to said exclusion control unit each time the
access is started, and issues an exclusive access cancellation notification to said exclusion
control unit each time the access terminates.

7. (Original) The system according to claim 6, wherein
said exclusion control unit queues an application which issues an
exclusive access request for the smart card if the smart card has already been exclusively

accessed by another application, and allows the queued application exclusive access upon receipt of the exclusive access cancellation notification from the application which has exclusively accessed the smart card.

8. (Previously Presented) The system according to claim 1, wherein said access control unit requests the smart card to cancel authentication of an application, in response to a smart card authentication cancellation notification from the application, when the application is the last application authenticated for the smart card.

9. (Currently Amended) An access management system managing access to a smart card by a plurality of applications, comprising:
exclusion control means for allowing an application exclusive access to the smart card, in response to an exclusive access request for the smart card from the application, when the smart card has a logical channel not exclusively accessed by another application; and

access control means for permitting the application allowed the exclusive access by the exclusion control unit to access the smart card, in response to an access request for the smart card from the application, when the application has already been authenticated for the smart card;

wherein said access control means manages authentication between applications and the smart card using process IDs of the applications.

10. (Currently Amended) A method for sharing a smart card and managing access to the smart card by a plurality of applications, comprising:

(a) allowing an application exclusive access to the smart card, in response to an exclusive access request for the smart card from the application, when the smart card has a logical channel not exclusively accessed by another application;

(b) permitting the application allowed the exclusive access by the allowing step (a) to access the smart card, in response to an access request for the smart card from the application allowed the exclusive access, when the application allowed the exclusive access has already been authenticated for the smart card; and

(c) managing authentication between applications and the smart card using process IDs of the applications.

11. (Currently Amended) An application including a plurality of accessing processes to one smart card, wherein:

an exclusive access request is issued for each accessing process each time the accessing process is started, and an exclusive access cancellation notification is issued each time each accessing process terminates; and

an authentication request is issued for the smart card to be accessed through the exclusive access request only in a first accessing process in said plurality of accessing processes;

wherein said each accessing process manages authentication between the application and the smart card using process IDs of the application.

12. (Currently Amended) A library of applications including a plurality of accessing processes to one smart card, wherein:

an exclusive access request is issued for each accessing process each time the accessing process is started, and an exclusive access cancellation notification is issued each time each accessing process terminates; and

an authentication request is issued for the smart card to be accessed through the exclusive access request only in a first accessing process in said plurality of accessing processes;

wherein said each access process manages authentication between applications and the smart card using process IDs of the applications.

13. (Currently Amended) A storage medium readable by an information processing device, in which a plurality of applications are operated in parallel, storing a program used to direct the information processing device to perform the processes of:

(a) allowing an application exclusive access to the smart card, in response to an exclusive access request for the smart card from the application, when the smart card has a logical channel not exclusively accessed by another application;

(b) permitting the application allowed the exclusive access by the allowing step (a) to access the smart card, in response to an access request for the smart card from the application, when the application has already been authenticated for the smart card; and

(c) managing authentication between applications and the smart card using process IDs of the applications.